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ABSTRACT

Investigated were: (1) attitudes of school staff in Western Australia toward the integration of children with intellectual handicaps into regular classrooms; and (2) relationships between staff attitudes and institutional variables. School staff included regular classroom teachers, special education teachers, teachers' assistants, and principals. Institutional variables included grade level, class size, years of teaching experience, years of experience teaching special needs children, perceived level of success in teaching special needs children, and type of school. A three-part questionnaire was completed by 317 staff members from 18 regular state primary schools and attached educational support centers. The questionnaire consisted of a 30-item attitude scale, a question assessing agreement or disagreement with the concept of integrating special needs children into regular classrooms, and six questions concerning respondents' school role and institutional variables. Results of the attitude scale indicated that the attitudes of school staff toward integration in Western Australian primary schools were, in general, not positive. Class size and perception of success were found to have implications for the implementation of integration programs and attitude change. (RH)

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The Attitude of Primary School Staff Toward the Integration of Mildly Handicapped Children

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Although Australia has as yet no national legislation mandating the education of handicapped children in the mainstream the reports of many state government investigations, for example the Beazley Report in Western Australia (1984), the Collins Report in Victoria (1984) and the work completed by Elkins (1981) in Queensland, have recommended that government education departments implement of integration programmes. In Western Australia many state primary schools have been directed to integrate children with varying handicaps and disabilities, including, children with physical and sensory disabilities, children with behavioural and emotional difficulties and children with mild to moderate intellectual handicaps (Vickery 1984).

A considerable amount or research has investigated the social and academic outcomes of integration for the individual handicapped child, (Calhoun & Elliot, 1977; Dunn, 1968; Maddan & Slavin, 1983; Semmel, Gottlieb & Robinson, 1979). However, in comparison less attention has generally been paid to the characteristics of the regular classroom environment into which the handicapped child is integrated. One such characteristic which could be expected to influence the extent to which handicapped children become not only physically integrated, but integral members of the class, is the attitude of the regular class teacher and other school staff, (for example, principals, student teachers and teaching assistants), toward integration. The purpose of the present study therefore was to investigate the attitudes of school staff in Western Australia toward the integration of children with intellectual handicaps.

Research with non-handicapped children indicates that teachers do hold different attitudes towards children they perceive as different and that these attitudes can be transmitted to the children in a variety of ways, (Brophy & Good, 1974; Good & Brophy, 1972). It has also been shown in both Australian and American studies, that regular class teachers consistently prefer gifted, physically handicapped and emotionally disturbed children over intellectually handicapped and learning disabled children to integrate in their classes, (Center, 1987; Green, Kappes & Parish, 1979). It is reasonable therefore to suggest that negative attitudes held by the regular classroom teacher toward intellectually handicapped children in general and the concept of integration could affect the academic, social and emotional outcomes for these children.

Studies concerned with teachers' attitudes to the integration of intellectually handicapped children in Australia, the United States and Britain have revealed both positive attitudes, (Kaufman, Agard & Semmel, 1985; Schmelkin, 1981) and negative attitudes, (Center, 1987; Thomas, 1985). Schmelkin (1981) found that regular and special education teachers and non-teachers in the United States, showed equal levels of positive support for statements stressing the social and emotional cost of segregation. Kaufman et al. (1985) also found that American regular class teachers held moderately positive attitudes toward integration, as did special education and resource room teachers, These positive attitudes occurred even when they were not provided with effective support services for the handicapped children in their classes. integration of teachers in both the United States

and Great Britain, found that the balance of opinion of both British and American teachers was against integration. However those teachers who had a tradition of mainstreaming experience (the teachers in the United States), were less negative.

More recent research in Australia has shown similarly equivocal results. In a large scale Australian study completed by Watts, Elkins, Henley, Apelt, Atkinson and Cochrane (1978), results suggested that regular class teachers and special class teachers were held ambivalent attitudes toward integration of mildly intellectually handicapped children. While Hudson and Clunies-Ross (1984) found their small sample of 16 regular class teachers were generally positive in attitude to integration, Harvey (1985) found that non-teachers held more positive attitudes than teachers and teachers in training, who were mostly ambivilant in attitude. In one of the most recent Australian studies, Center (1987) found that primary school teachers in New South Wales were less tolerant in attitude toward integration then other groups of teachers.

Some studies suggest that staff who are more distant from the students, for example principals, are more positive then those who would interact daily with the handicapped children. Center ,Ward and Parmenter (1985) found that most school principals were in favour of the concept of integrating handicapped children if suitable support services were available. Where these services were not available principals were only positive about integrating children who require neither extra competencies nor extra curricular duties from the regular class teacher. These criteria would exclude the intellectually handicapped.

The availability of support services is one factor which studies have consistently found to be related to more positive attitudes, (Baker & Gottlieb, 1980; Center, 1987; Center et al., 1985; Larrivee & Cook, 1979; Mandell & Strain, 1978). Other factors within the school environment which have been investigated include, class size, grade level taught, team teaching and the structure of the classroom and school, (for example, open versus closed and graded versus non-graded settings). Of these factors, class size and the availability of support have most consistently been shown to be related to teacher attitudes towards integration, (Center, 1987; Harvey & Green, 1984; Larrivee & Cook, 1979; Smart, Wilton & Keeling, 1980; Thomas 1985).

Studies have also investigated the relationship between teacher attitude toward the practice of integration and various teacher related variables, including, sex, age, years of teaching experience and years of experience teaching special needs children, number of courses in special education, perceived confidence and success in teaching handicapped children and amount of contact with handicapped people, (Gottlieb & Baker, 1980; Harvey, 1985; Harvey & Green, 1984; Stephans & Braun, 1980). Results regarding these teacher related variables are less conclusive than studies of school environment variables. Although sex and age do not appear to be related to teachers' attitudes toward integration, results from other variables are equivocal. Perceived level of success in dealing with handicapped children is the variable most consistently found to be correlated with teachers' attitudes, (see for example, Harvey & Green, 1984; Larrivee & Cook, 1979; Thomas, 1985).

Studies investigating the attitudes of teachers and other school staff toward integration have therefore presented equivocal results, both with regard to overall attitude and the variables that influence this attitude. In Australia there have been few studies, (Center, 1987; Center et al., 1985; Harvey & Green, 1984; Watts et al., 1978), and in Western Australia to date no published investigation of the attitudes of school staff to integration. There was a need therefore to investigate further the attitudes of teachers to the process of integrating intellectually handicapped children, and to examine the relationship between attitudes and institutional variables. Consequently the aims of this study were :

(i) To investigate the attitudes of a sample of Western Australian regular teachers, special education teachers and their principals, to the concept of integrating mildly intellectually handicapped children into regular classes.

(ii) To investigate the relationship between these attitudes and a number of teacher related and school environment related institutional variables, including, grade level taught, class size, years of teaching experience, years of experience teaching special needs children, perceived level of success teaching special needs children and type of school.

Method

Subjects

Three hundred and seventeen principals, regular and educational support (special education) teachers and their assistants, (student teachers and teacher aides), from one of the four State Education Department regions in Perth were surveyed in July 1986. The teachers were employed in eighteen regular State primary schools and in educational support centres attached to six of these primary schools. The sample of schools was selected from the total population of schools in the region, with the restriction that there was a proportional representation of regular primary schools and schools with educational support facilities attached. Eighty -six percent of teachers in these schools participated in the study. Of the 317 questionnaires returned, 16 were discarded because of incomplete data records and the remaining 301 were used in the analysis. Details of the subject population and types of schools surveyed can be found in Table 1. The "Other" category in this table includes student teachers and teacher aides.

As shown in Table 1, 85% of the sample were regular class teachers whereas only 11% were educational support teachers. Of the regular class teachers, 68% were employed in regular primary schools without educational support facilities. Eighty-one percent of the educational support teachers were employed in schools with educational support facilities attached.

Table 1
Details of the Total Sample

	Regular Primary School			Regular Primary School + Educational Support Facilities		
	Regular	Ed.Support	Other	Regular	Ed.Support	Other
Frequency	176	9	6	81	26	4
Percent	58%	3%	2%	27%	9%	1%
Average Number of Years Teaching	13.6	13.33		13.58	11.88	
Average Number of Years Teaching Special Needs Children	2.14	2.33		2.28	4.64	

Table 1 also summarises the data on the total number of years teaching experience and the years of experience teaching children with special needs. As can be seen there were few differences between regular and educational support teachers in regular primary schools, in the average number of years general teaching experience and also in the average number of years of experience teaching children with special needs. It should be noted however, that it is likely the experience of regular teachers in teaching special needs children differs from that of educational support teachers, who usually teach special needs children in small groups withdrawn from the regular classroom for specialized instruction. In schools with support units the educational support teachers had more years of experience with special needs children than did other teachers in these schools or schools without support units. These support teachers also had slightly less general teaching experience than all other teachers.

Description of the Questionnaire

The "Teachers' Opinion Questionnaire", which all principals and teaching staff completed, consisted of three sections. The first section consisted of a 30 item attitude scale, which the respondents were asked to complete by indicating the extent of their agreement or disabreement with each statement using a five point Likert-type scale. The scale was originally devised by Larrivee and Cook (1979), as the "Attitude Toward Mainstreaming Scale" (ATMS) for use with American teachers and was adapted for use in Australian schools by Hudson and Clunies-Ross (1984). The Australian adaptation was used in the current study.

Larrivee and Cook (1979) found the scale to have a split-half reliability of .92. Green, Rock and Weisenstein (1983) further researched the psychometric properties of the questionnaire and found an internal consistency reliability coefficient of .89. They also found support for the test validity by way of significant correlations with other questionnaires measuring attitudes toward handicapped individuals (Schmelkin, 1981), and teachers' willingness to accept handicapped children into their classes.

The second section comprised a single item question "Do you agree with the concept of integrating special needs children into regular classrooms?", to which respondants were required to give a yes/no answer. The third section of the questionnaire required teachers to complete a series of six questions related to their position in the school and the following institutional variables; 1. Grade level taught, 2. Number of students in the class, 3. Number of years of

teaching experience, 4. Number of years of experience teaching special needs children, and 5. The degree of perceived success in teaching special needs children. The sixth institutional variable considered in the study was the type of school. This variable was not included on the questionnaire.

Procedure

The principals of the eighteen schools were contacted initially to discuss the number of questionnaires required, and the procedures for completion and return of the questionnaires. Each school principal was then sent the appropriate number of questionnaires with a cover letter requesting that he or she distribute them to all teachers at the school, for completion on one of the two pupil-free days in early July 1986. They were then requested to return them in the postage paid envelope provided. Of the eighteen schools sampled, all returned questionnaires. A total of 317 questionnaires were returned from the 376 that were sent out giving an overall return rate of 84%.

Results and Discussion

Attitudes of School Staff Toward Integration

The first aim of the current study was to investigate the attitudes toward integration of principals, regular class teachers, educational support teachers and staff assisting these teachers,

(student teachers and teacher aides). Table 2 presents the means and standard deviations for these four groups on the 30 item attitude scale.

Table 2

Mean Attitude Score for the Different Categories of School Staff

Position	Mean	Standard Deviation	N
Principal	99.00	24.18	11
Regular Teacher	85.85	17.00	245
Educational Support Teacher	95.94	16.15	35
Other	97.55	10.16	11

Note. Minimum score = 30, Maximum score = 150.

High mean values are indicative of a positive attitude toward integration. The mean for the total sample was 94.58. Because of the unequal size of the groups, a Levene's test for the homogeneity of variance was completed prior to an analysis of variance, (Levene 1960). This test revealed no significant differences in the variances for the four groups. A one way analysis of variance (ANOVA) for unequal group sizes was completed on the results for the total of the 30 item scale. This test revealed a significant main effect for groups. (F 3,295) = 6.44, p <.05). Further analysis using the Fisher Least Significant Difference test (Carmer & Swanson, 1973), with a more conservative level of alpha, .01, to control for type one error, was used to investigate individual pairwise comparisons. These post hoc tests revealed that there were no significant differences between the attitudes of principals, educational support teachers and teacher assistants. Significant differences were found however, between the

attitudes of principals and educational support teachers, and the attitudes of regular teachers, (t (295) = 2.51, p =.01; t (295) = 3.24, p <.01).

The data for percentage of agreement with the concept of integration as measured by the single item question also support this result. There was more then 50% agreement with the concept of integration for all groups except the regular class teacher. Table 3 presents the percentage of agreement on the single item question for all four groups.

Table 3
Percentage of School Staff in Agreement with the Concept of Integration

Position	Percentage	N
Principal	73%	11
Regular Teacher	45%	245
Educational Support Teacher	76%	35
Other	67%	11

The results of the attitude scale indicate that the attitudes of school staff toward integration in Western Australian primary schools are, in general, not positive. This finding is consistent with the results of recent studies in other Australian states, for example, Victoria, (Harvey, 1985) and New South Wales, (Center 1987).

Principals and educational support teachers appear to hold less negative attitudes toward integration than do regular class teachers. This could be, however for different reasons. Principals are removed from the day to day responsibility for instruction and management of

handicapped children within the classroom and as noted by Center (1987), may not always be aware of the specific anxieties or problems of their regular class teachers. Although these more positive attitudes can act as a model for the regular class teacher, it is important for the success of integration programmes that principals do become more aware of the anxieties and problems of their staff so as to be more flexible in organizational matters, and to provide as much support as possible within the school for teachers who are integrating handicapped children.

Educational support teachers however, differ from regular class teachers in that they generally draw upon a greater knowledge of handicapped children and through their specialized training, have more teaching strategies to instruct handicapped children and skills to manage these children. Management and instruction is also facilitated by smaller class sizes. Educational support teachers in this study also reported higher levels of perceived success in teaching handicapped children. These factors may have lead to higher levels of confidence in their own ability to cope with integrated handicapped children and in their confidence in the process of integration.

This result has several implications for attitude change. Firstly, more consultation between regular classroom teachers and educational, support teachers is seen as highly desirable in order to share knowledge of instructional and management techniques. In many of the schools with educational support facilities , this process is already occurring. Secondly, more formal training of regular class teachers to increase their knowledge and skill level, has been shown

in previous studies, (Larrivee, 1981; Salend & Johns, 1982; Stephan & Braun, 1980), to be associated with more positive attitudes toward integration and more successful outcomes of integration programmes. However further investigation of this variable is needed, since the present survey did not collect data on the number of courses attended by school staff, either pre-service or in-service, relating to special education.

Variables that Related to Attitude Toward Integration

The second aim of the study was to investigate the relationship between a number of institutional variables and the attitudes of various school staff toward integration. Table 4 presents the means and standard deviations of the total 30 item scale, broken down by the six institutional variables.

Six one way ANOVA's for groups of unequal size were completed for the six institutional variables. A bonferroni correction was used to adjust the type one error rate of .05 to account for the multiple analyses. Using this new alpha level of .008, three of the six institutional variables, grade level taught, class size and teachers perception of success showed significant main effects, (F (5,289)=5.83, p <.008; F (7,277)=3.34, p <.008; F (3,292)=9.51, p < 008). For all three comparisons the Levene test (Levene 1960) revealed that the homogeneity of variance assumption was met.

Table 4
Mean Attitude of School Staff Grouped by Background Variable

Institutional Variables	Mean	Standard Deviation	N
Grade Taught *			
No Classes	101.21	20.43	14
Junior Primary (1-3)	86.10	16.26	84
Middle Primary (4-5)	85.92	17.68	40
Senior Primary (5-6)	87.23	17.12	57
More then one grade	84.83	15.99	78
Special Classes	101.48	17.28	25
Class Size *			
No Classes	104.00	19.17	12
Less then 10	97.11	21.51	9
10-14	102.82	16.22	11
15-19	90.00	7.18	5
20-24	86.47	18.12	17
25-29	86.34	16.32	89
30-34	85.96	16.49	116
35 or more	88.26	20.36	27
Years of Experience			
One or less	97.21	14.07	14
2-5	86.43	16.41	28
6-10	88.61	17.96	103
11-15	87.20	15.76	61
16-20	85.77	14.48	44
21-25	82.33	22.35	22
Greater then 25	91.84	22.02	25
Years of Experience with Special Needs Children			
One or less	87.26	15.63	168
2-5	88.24	19.73	92
6-10	89.12	19.99	26
11-15	96.43	13.53	7
16-20	77.75	23.39	4
Teachers Perception of Success *			
No Experience	87.61	15.47	113
Low	74.19	10.55	27
Average	88.75	17.50	121
High	96.53	20.21	36
Type of School			
Regular	86.55	18.60	188
Regular plus Educational Support Unit	88.62	16.65	50
Regular plus Educational Support Centre	91.28	13.80	64

* significant at $p < .008$

Post hoc Fisher Least Significant Difference tests (Carmen & Swanson, 1973), were used to make pairwise comparisons to determine where the differences in attitudes were located for grade level, class size and teachers perception of success. Because multiple comparisons had already been conducted, a bonferroni correction (Harris, 1985), was also used to adjust the alpha level for these pairwise comparisons, in order to control the type one error rate further. With regard to grade level taught, all significant differences represented differences in attitude between regular class teachers and two of the other groups, educational support teachers, (that is teachers taking special classes), and principals, (that is staff taking no classes). When analysed separately, the results of regular class teachers revealed no significant relationship between grade level taught and attitude toward integration.

The class size variable also reflected the influence of the more positive attitudes of school principals. Post hoc pairwise comparisons revealed that staff not involved in taking classes showed significantly more positive attitudes toward integration than did teachers in classes of 25-29 or 30-34, (t (277)=3.35, p <.001; t (277)=3.48, p <.001),the typical primary school class size. There were no significant differences in attitude found for staff teaching other sized classes, although the means in Table 4 show a trend of more negative attitude as class size increases.

With regard to the teachers' perception of success in teaching special needs children, pairwise comparisons revealed that staff who perceived their success level as low held significantly less positive

attitudes than staff in all other categories, (t (292)=4.12, p <.008), or high, (t (292)=5.29, p <.008) or staff with no experience in teaching special needs children, (t (292)=3.78, p <.008). Thus teachers' attitudes toward integration become more positive as their level of perceived success becomes higher.

The institutional variables, class size and perception of success therefore have implications for the implementation of integration programmes and attitude change. Many authors have found the school environment variable, class size, to be related to teachers' attitudes toward integration, (Harvey & Green, 1984; Larrivee & Cook, 1979; Smart et al., 1980; Thomas, 1985). As class size increases there has been a corresponding decline in positive attitude toward integration. Although not statistically significant, this trend was also identified in the current data. It is not unreasonable to suggest that where class sizes are large, the demands placed on teachers time could be already great. This stress factor will only be increased by the addition of a handicapped child with special needs, which may explain a more negative attitude toward integration.

Some advocates would therefore suggest a reduction in class size as the logical solution to this problem. However this solution is not always possible and other avenues need to be explored to relieve the regular class teacher of the added stress factor. Other within school modifications which have been found to be successful include, the provision of teacher aides or parent volunteers as assistants in the regular classroom, peer tutoring programmes and more individualized programming, (Center, 1987). Research already cited confirms that

where extra supports are provided teachers tend to hold more positive attitudes toward integration and have more successful integration experiences.

With regard to the second variable, teachers' perception of success in teaching special needs children, a number of factors could be important in increasing teachers' perceived level of success. These include, careful implementation of the integration programme, consultation between the regular class teacher and the educational support teacher, and increased knowledge of handicapped children and strategies to instruct and manage these children. As already noted, there is evidence to suggest that training in behaviour management and appropriate instructional methods, either through pre-service university or college courses or through in-service training courses, is associated with more positive attitudes toward integration, (Baker & Gottlieb, 1980; Larrivee, 1981; Stephan and Braun, 1980). Hence, it is important that where teachers are expected to integrate handicapped children into their classes, they are given instruction and information which will both increase their skill level and their confidence in their ability to teach handicapped children.

The results of this study therefore have implications for the organization and implementation of integration programmes in Western Australian primary schools. Since the attitudes of school staff, particularly regular class teachers, have been shown to be somewhat negative, it is important for the department of education to address the problem of teacher attitude prior to implementing integration programmes. A teacher's negative attitude toward integration could

result in the breakdown of an integration programme within a primary school, organizational or administrative problems or most importantly negative academic and social outcomes for the integrated handicapped children.

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